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Attorney's Docket No.: 17856-002US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Khalaf et al.
Serial No. : 10/500,093
Filed : June 24, 2004
Title : DNA MINOR GROOVE BINDING COMPOUNDS

Art Unit : Unknown
Examiner : Unknown

Mail Stop Amendment

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This statement is being filed before the receipt of a first Office Action on the merits.

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Respectfully submitted,

Date: 3 JANUARY 2005


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Substitute Form PTO-1449 (Modified) Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR 1.98(b))	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17856-002US1	Application No. 10/500,093
	Applicant Khalaf et al.		
	Filing Date June 24, 2004	Group Art Unit	

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AA	WO 97/28123	07.08.97	WIPO				
	AB	WO 97/30975	28.08.97	WIPO				
	AC	WO 98/21202	22.05.98	WIPO				
	AD	WO 01/19792 A1	22.03.01	WIPO				
	AE	WO 01/74898 A2	11.10.01	WIPO				
	AF	WO 02/00650 A2	03.01.02	WIPO				
	AG	0 343 893 A1	22.05.89	EP				
	AH	WO 02/100832 A1	19.12.02	WIPO				
	AI	WO 02/101007 A2	19.12.02	WIPO				

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AJ	Bloomfield et al. "Electronic and Vibrational Spectroscopy" <u>Nucleic Acids: Structures, Properties and Functions</u> , pages 176-180 and 561-564, (2000).
	AK	Abedawn I. Khalaf et al, "The Synthesis of Some Head to Head Linked DNA Minor Groove Binders" <u>Tetrahedron</u> , Vol. 56: pages 5225-5239 (2000).
	AL	B.S. Praveen Reddy et al, "Synthetic DNA minor groove-binding drugs" <u>Pharmacology & Therapeutics</u> , Vol. 84: pages 1-111 (1999).
	AM	Bernhard H. Geierstanger et al, "Design of A G-C-Specific DNA Minor Groove-Binding Peptide" <u>Science</u> , Vol. 266: pages 646-651 (1994).
	AN	Bertrand Plouvier et al, "Antitumor Combilexin. A Thiazole-Containing Analogue of Netropsin Linked to an Acridine Chromophore" <u>Bioconjugate Chem.</u> , Vol. 5: pages 475-481 (1994).
	AO	Bertrand Plouvier et al, "Influence of the methyl substituents of a thiazole-containing lexitropsin on the mode of binding to DNA" <u>Anti-Cancer Drug Design</u> , Vol. 10: pages 155-166 (1995).
	AP	Christian Bailly et al, "Binding Properties and DNA Sequence-Specific Recognition of Two Bithiazole-Linked Netropsin Hybrid Molecules" <u>Biochemistry</u> , Vol. 31: pages 8349-8362 (1992).
	AQ	David E. Wemmer, "Ligands Recognizing the Minor Groove of DNA: Development and Applications" <u>Biopolymers (Nucleic Acid Sciences)</u> , Vol. 52: pages 197-211, 2001.
	AR	Dmitry V. Bugreev et al, "Inhibition of Human DNA Topoisomerase I by New DNA Minor Groove Ligands: Derivatives of Oligo-1,3-Thiazolecarboxamides" <u>Antisense & Nuclear Acid Drug Development</u> , Vol. 11: 137-147 (2001).
	AS	E.L. Vasyutina et al, "Interaction of the Human Topoisomerase I-DNA Complex with Oligo-1,3-Thiazolecarboxamides and Their Oligonucleotide Conjugates" <u>Molecular Biology</u> , Vol. 34, No. 34: pages 356-362 (2000).

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 17856-002US1	Application No. 10/500,093
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR § 1.98(b))		Applicant Khalaf et al.	
		Filing Date June 24, 2004	Group Art Unit

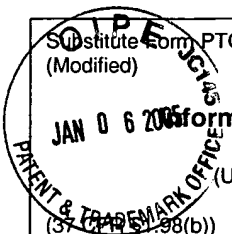
Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AT	Guojian Xie et al, "Bisindolylmaleimides Linked to DNA Minor Groove Binding Lexitropsins: Synthesis, Inhibitory Activity against Topoisomerase I, and Biological Evaluation" <u>Journal of Medicinal Chemistry</u> , Vol. 39: pages 1049-1055 (1996).
	AU	Jakob Bunkenborg et al, "NMR Characterization of the DNA Binding Properties of a Novel Hoechst 33258 Analogue Peptide Building Block" <u>Bioconjugate Chem.</u> , Vol. 13: pages 927-936 (2002).
	AV	John W. Trauger et al, "Recognition of 16 Base Pairs in the Minor Groove of DNA by a Pyrrole-Imidazole Polyamide Dimer" <u>Journal of the American Chemical Society</u> , Vol. 120: pages 3534-3535 (1998).
	AW	K. Ekambareswara Rao et al, "Synthesis of Novel Thiazole-Containing DNA Minor Groove Binding Oligopeptides Related to the Antibiotic Distamycin" <u>J. Org. Chem.</u> , Vol. 55: pages 728-737 (1990).
	AX	K.E. Rao, et al, "Molecular recognition between oligopeptides and nucleic acids: DNA sequence specificity and binding properties of thiazole-lexitropsins incorporating the concepts of base site acceptance and avoidance" <u>Anti-Cancer Drug Design</u> , Vol. 5: pages 3-20 (1990).
	AY	K.F. Tuchin et al, "Ligands Possessing Affinity for Definite Pairs of DNA Bases" <u>SOVIET J. BIOORG. CHEM. (ENG. TRANSL.)</u> , Vol. 4: pages 780-791 (1978).
	AZ	Leif Grehn et al, "Synthesis and Antiviral Activity of Distamycin A Analogues: Substitutions on the Different Pyrrole Nitrogens and in the Amidine Function" <u>Journal of Medicinal Chemistry</u> , Vol. 26: pages 1042-1049 (1983).
	AAA	Liliane A. Dickinson et al, "Inhibition of RNA polymerase II transcription in human cells by synthetic DNA-binding ligands" <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 95: pages 12890-12895 (1998).
	ABB	Lu Ding et al, "Synthesis and Antiviral Activity of Three Pyrazole Analogues of Distamycin A" <u>Acta Chemica Scandinavica</u> , Vol. 48: pages 498-505 (1994).
	ACC	Milan Mrksich et al "Antiparallel side-by-side dimeric motif for sequence-specific recognition in the minor groove of DNA by the designed peptide 1-methylimidazole-2-carboxamide netropsin" <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 89: pages 7586-7590 (1992).
	ADD	Moses Lee et al, "GC Base Sequence Recognition by Oligo(imidazolecarboxamide) and C-Terminus-Modified Analogues of Distamycin Deduced from Circular Dichroism, Proton Nuclear Magnetic Resonance, and Methidiumpropylethylenediamine teracetate-Iron(II) Footprinting Studies" <u>Biochemistry</u> , Vol. 32: pages 4237-4245 (1993).
	AEE	Natalia B. Dyatkina et al, "Minor Groove DNA Binders as Antimicrobial Agents. 1. Pyrrole Tetraamides Are Potent Antibacterials against Vancomycin Resistant <i>Enterococci</i> and Methicillin Resistant <i>Staphylococcus aureus</i> " <u>Journal of Medicinal Chemistry</u> , Vol. 45: pages: 805-817 (2002).
	AFF	Nicholas R. Wurtz et al, "Inhibition of DNA Binding by NF-kB with Pyrrole-Imidazole Polyamides" <u>Biochemistry</u> , Vol. 41: pages 7604-7609 (2002).
	AGG	Nouri Neamati et al, "Highly Potent Synthetic Polyamides, Bisdistamycins, and Lexitropsins as Inhibitors of Human Immunodeficiency Virus Type 1 Integrase" <u>Molecular Pharmacology</u> , Vol. 54: 280-290 (1998).
	AHH	Peter B. Dervan, "Molecular Recognition of DNA by Small Molecules" <u>Bioorganic & Medicinal Chemistry</u> , Vol. 9: pages 2215-2235 (2001).
	AII	Robert V. Fishleigh et al "DNA Binding, Solubility, and Partitioning Characteristics of Extended Lexitropsins" <u>Journal of Medicinal Chemistry</u> , Vol. 43: pages 3257-3266 (2000).
	AJJ	Roland W. Burli et al, "DNA Binding Ligands with Excellent Antibiotic Potency Against Drug-Resistant Gram-Positive Bacteria" <u>Bioorganic & Medicinal Chemistry Letters</u> , Vol. 12: pages 2591-2594 (2002).

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	AKK	Rulin Zhao et al, "Synthesis and Biological Evaluation of Hybrid Molecules Containing the Pyrroloquinoline Nucleus and DNA Minor Groove Binders" <u>Bioorganic & Medicinal Chemistry Letters</u> , Vol. 6, No. 18: pages 2169-2172 (1996).
	ALL	S.M. Sondhi et al, "Lexitropsin Conjugates: Action on DNA Targets" <u>Current Medicinal Chemistry</u> , Vol. 4: pages 313-358 (1997).
	AMM	Sanjay K. Sharma et al, "Design and synthesis of new thiazolated cross-linked DNA binding polyamides for altered sequence recognition" <u>Tetrahedron</u> , Vol. 58: pages 3417-3421 (2002).
	ANN	Sanjay K. Sharma et al, "Design and Synthesis of Novel Thiazole-Containing Cross-Linked Polyamides Related to the Antiviral Antibiotic Distamycin" <u>J. Org. Chem.</u> , Vol. 65: pages 1102-1107 (2000).
	AOO	Sanjay K. Sharma et al, "Design, Synthesis, and Intracellular Localization of a Fluorescently Labeled DNA Binding Polyamide Related to the Antibiotic Distamycin" <u>Bioorganic & Medicinal Chemistry Letters</u> , Vol. 11: pages 769-772 (2001).
	APP	Sanjay K. Sharma et al, "Inhibition of Feline Immunodeficiency Virus (FIV) Replication DNA Binding Polyamides" <u>Bioorganic & Medicinal Chemistry Letters</u> , Vol. 12: pages 2007-2010 (2002).
	AQQ	Silvana Frau et al, "Binding of a Porphyrin Conjugate of Hoechst 33258 to DNA. II. NMR Spectroscopic Studies Detect Multiple Binding Modes to A 12-MER Nonspecific Complementary Duplex DNA" <u>Nucleosides, Nucleotides & Nucleic Acids</u> , Vol. 20(1&2), 145-156 (2001).
	ARR	Tammy J. Dwyer et al, "Design and Binding of a Distamycin A Analog to d(CGCAAGTTGGC)•d(GCCAACTTGCG): Synthesis, NMR Studies, and Implications for the Design of Sequence-Specific Minor Groove Binding Oligopeptides" <u>Journal of the American Chemical Society</u> , Vol. 114, No. 15: pages 5910-5919 (1992).
	ASS	Vladimir A. Ryabinin et al, "Synthesis and Evaluation of Oligo-1,3-thiazolecarboxamide Derivatives as HIV-1 Reverse Transcriptase Inhibitors" <u>Bioorganic & Medicinal Chemistry</u> , Vol. 8: pages 985-993 (2000).
	ATT	Xiaogang Han et al, "Sequence Specific Recognition of Ligand-DNA Complexes Studied by NMR" <u>Current Medicinal Chemistry</u> , Vol. 8: pages 551-581 (2001).
	AUU	Yanwu Yang et al, "Studies on Cooperative Binding of an Extended Distamycin A Analogue in the Minor Groove of DNA by NMR Spectroscopy" <u>Biochemical and Biophysical Research Communications</u> , Vol. 222: pages 764-769 (1996).

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